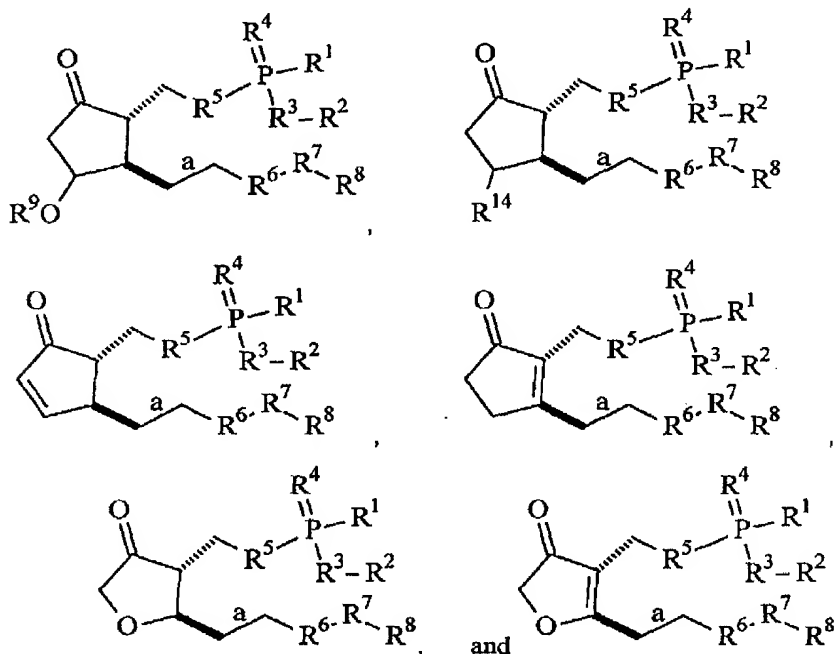


Appl. No. 09/633,180  
 Atty. Docket No. 8191  
 Amdt. dated 01/09/2004  
 Reply to Office Action of 09/10/2003  
 Customer No. 27752

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (Currently Amended) A 2-decarboxy-2-phosphinico prostaglandin derivative having a structure selected from the group consisting of:



wherein bond a is selected from the group consisting of a single bond, a *trans* double bond, and a triple bond;

R<sup>1</sup> is selected from the group consisting of a hydrogen atom, a monovalent hydrocarbon group having 1 to 4 carbon atoms, and a monovalent heterogenous group having 1 to 4 member atoms, wherein the member atom directly adjacent to P in said heterogenous group is not oxygen;

R<sup>2</sup> is selected from the group consisting of a hydrogen atom, a monovalent hydrocarbon group, a substituted monovalent hydrocarbon group, a monovalent heterogeneous group, a substituted monovalent heterogeneous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, a substituted heteroaromatic group, and a mono- or ~~polyvalent inorganic cation and a mono- or polyvalent organic cation;~~

Appl. No. 09/633,180  
Atty. Docket No. 8191  
Amdt. dated 01/09/2004  
Reply to Office Action of 09/10/2003  
Customer No. 27752

$R^3$  is selected from the group consisting of an oxygen atom, a sulfur atom, and  $NH$ ;

$R^4$  is selected from the group consisting of an oxygen atom and a sulfur atom;

$R^5$  is a divalent group selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogeneous group, and a substituted heterogeneous group;

$R^6$  is nil or a divalent group selected from the group consisting of  $-CH_2-$ ,  $-C(O)-$  and  $-C(R^{10})(OR^{10})-$ ;

$R^7$  is nil or a divalent group having the formula  $-(CD(D))_p-X-(CD(D))_q-$ , wherein  $p$  is an integer from 0 to 3 and  $q$  is an integer from 0 to 3,  $X$  is selected from the group consisting of an oxygen atom, a divalent hydrocarbon group, a sulfur atom,  $SO$ ,  $SO_2$ , and  $ND$ , and each  $D$  is independently selected from the group consisting of a hydrogen atom, a monovalent hydrocarbon group of 1 to 4 carbon atoms, and a monovalent heterogenous group of 1 to 4 member atoms;

$R^8$  is selected from the group consisting of a hydrocarbon group, a substituted hydrocarbon group, a heterogenous group, a substituted heterogenous group, a carbocyclic group, a substituted carbocyclic group, a heterocyclic group, a substituted heterocyclic group, an aromatic group, a substituted aromatic group, a heteroaromatic group, and a substituted heteroaromatic group;

$R^9$  is selected from the group consisting of a hydrogen atom, a monovalent hydrocarbon group of 1 to 4 carbon atoms, and a monovalent heterogenous group of 1 to 4 member atoms; and

$R^{14}$  is independently selected from the group consisting of nil, a hydrogen atom, a halogen atom, a monovalent hydrocarbon group of 1 to 4 carbon atoms, and a monovalent heterogenous group of 1 to 4 member atoms.

Claim 2. (Previously presented) The compound of claim 1, wherein  $R^1$  is selected from the group consisting of a hydrogen atom and a monovalent hydrocarbon group.

Claim 3. (Previously presented) The compound of claim 2, wherein  $R^1$  is a monovalent hydrocarbon group having 1 to 3 carbon atoms.

Claim 4. (Previously presented) The compound of claim 3, wherein  $R^1$  has 1 to 2 carbon atoms.

Claim 5. (Previously presented) The compound of claim 4, wherein  $R^1$  has 1 carbon atom.

Claim 6. (Previously presented) The compound of claim 2, wherein  $R^1$  is a hydrogen atom.

Appl. No. 09/633,180  
Atty. Docket No. 8191  
Amdt. dated 01/09/2004  
Reply to Office Action of 09/10/2003  
Customer No. 27752

Claim 7. (Previously presented) The compound of claim 1, wherein  $R^2$  is a hydrogen atom.

Claim 8. (Previously presented) The compound of claim 1, wherein  $R^3$  is an oxygen atom.

Claim 9. (Previously presented) The compound of claim 1, wherein  $R^4$  is an oxygen atom.

Claim 10. (Previously presented) The compound of claim 1, wherein  $R^5$  is a hydrocarbon group having 1 to 5 carbon atoms in its chain.

Claim 11. (Currently Amended) The compound of claim 10, wherein  $R^5$  has a *cis* double bond at position C<sub>5</sub>-C<sub>6</sub> position.

Claim 12. (Canceled)

Claim 13. (Previously presented) The compound of claim 1, wherein  $R^7$  is selected from the group consisting of -CH<sub>2</sub>O-, -CH=CH-, -CH=C=CH-, -CH<sub>2</sub>S-, -CH<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>NH-, -CH<sub>2</sub>NCH<sub>2</sub>-, and -CH<sub>2</sub>O(CH<sub>2</sub>)<sub>3</sub>O-.

Claim 14. (Previously presented) The compound of claim 1, wherein  $R^8$  is selected from the group consisting of a methyl group, aromatic groups, substituted aromatic groups, heteroaromatic groups, and substituted heteroaromatic groups.

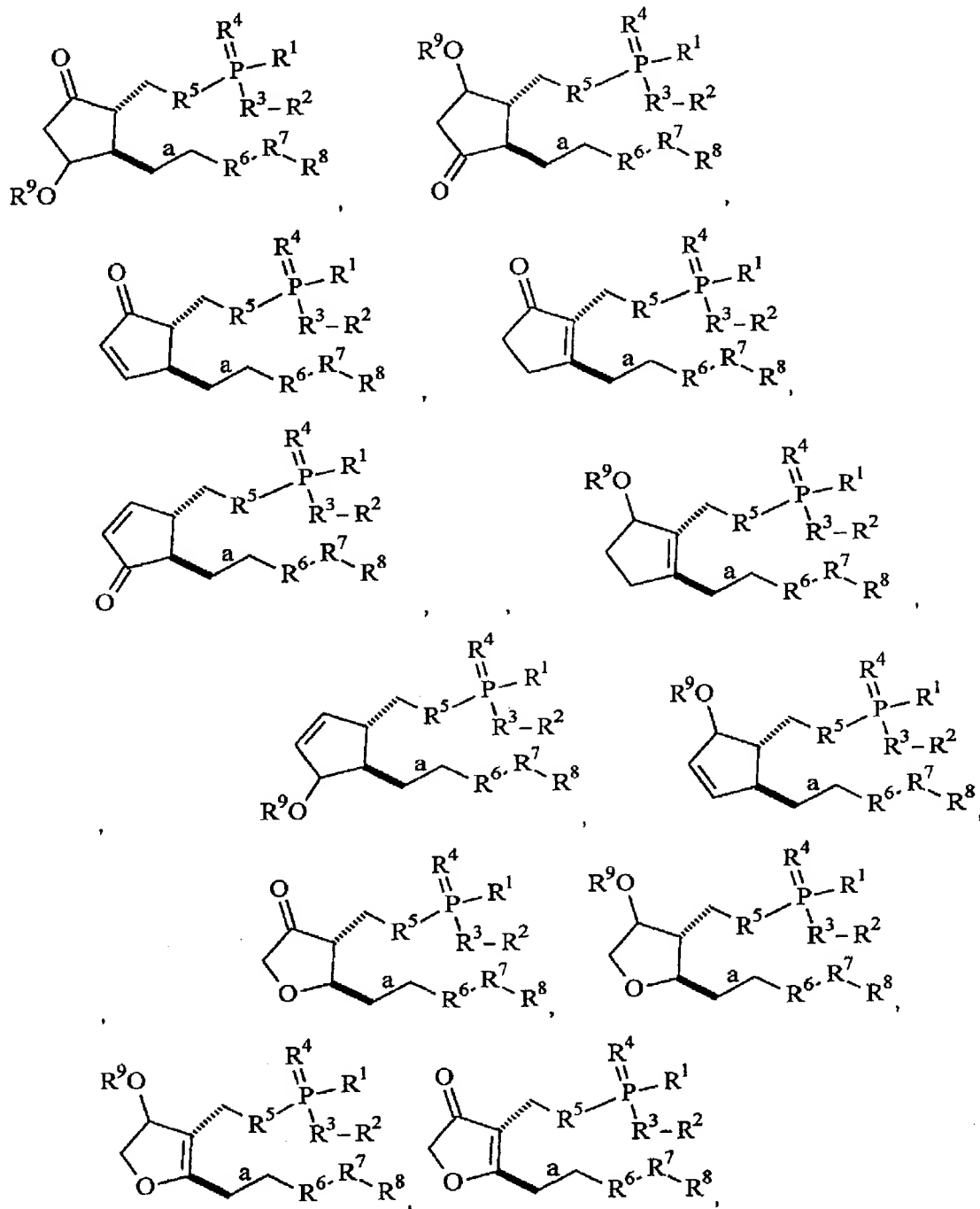
Claim 15. (Canceled)

Claim 16. (Previously presented) The compound of claim 1, wherein bond a is selected from the group consisting of a single bond and a *cis* double bond

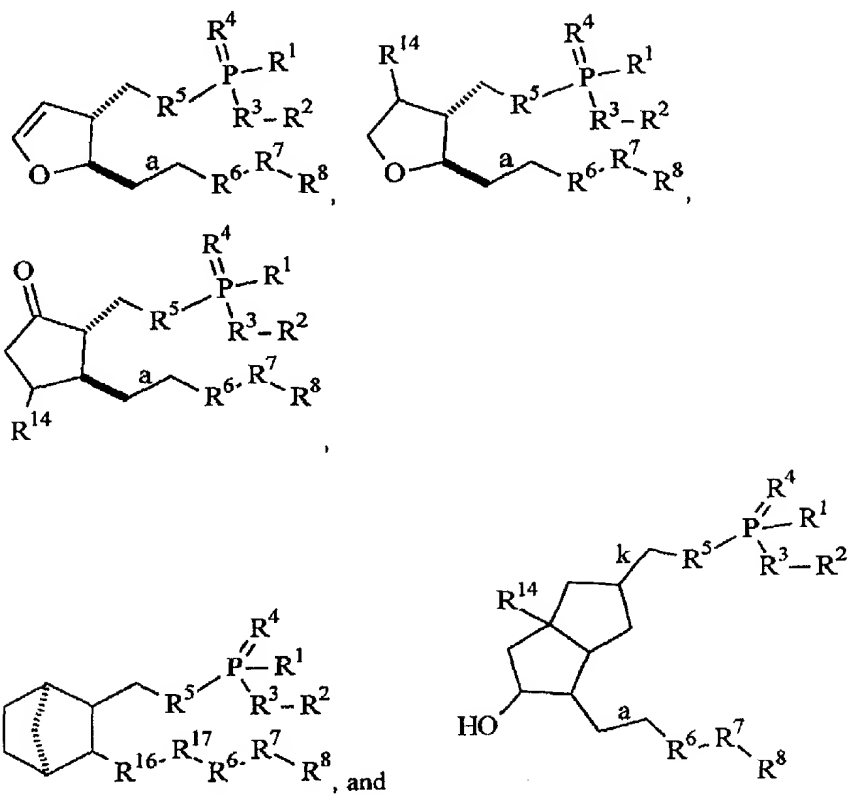
Claims 17-27. (Canceled)

Claim 28. (Previously presented) The compound of claim 1, wherein the derivative has a structure selected from the group consisting of:

Appl. No. 09/633,180  
Atty. Docket No. 8191  
Amdt. dated 01/09/2004  
Reply to Office Action of 09/10/2003  
Customer No. 27752



Appl. No. 09/633,180  
 Atty. Docket No. 8191  
 Amdt. dated 01/09/2004  
 Reply to Office Action of 09/10/2003  
 Customer No. 27752



wherein R<sup>14</sup> is independently selected from the group consisting of nil, a hydrogen atom, a halogen atom, a monovalent hydrocarbon group of 1 to 4 carbon atoms, and a monovalent heterogenous group of 1 to 4 member atoms.

Claims 29-50. (Canceled)